

CLAIMS

What is claimed is:

1. A method of controlling a supply platter motor in a no-rewind film transport system, comprising:
 - 5 receiving take-up platter control signal information from a take-up platter controller;
 - processing the take-up platter control signal information; and
 - controlling the supply platter motor based at least in part on the processed take-up platter control signal information.
- 10 2. The method of claim 1, wherein the take-up platter control signal information is processed using a transfer function.
3. The method of claim 2, wherein the transfer function is substantially proportional to the instantaneous ratio between the angular speed of the take-up platter and the required
15 instantaneous angular speed of the supply platter.
4. The method of claim 2, wherein the transfer function comprises a correction factor.
5. A method of claim 2, wherein the processing occurs as a function of time.
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6. A method of claim 2, wherein when a supply film roll on the supply platter has an inner radius approximately equal to an outer radius of a take-up film roll on a take-up platter, the transfer function is substantially constant.

7. The method of claim 1, further comprising receiving supply platter motor speed or positional signal information and take-up platter motor speed or positional signal information and processing the supply platter motor speed or positional signal information and take-up platter motor speed or positional signal information, wherein the supply platter motor is controlled based at least in part on the processed supply platter motor speed or positional signal information and the processed take-up platter motor speed or positional signal information.

8. The method of claim 6, wherein the take-up platter control signal information, the supply platter motor speed or positional signal information and take-up platter motor speed or positional signal information are processed by a transfer function.

9. A method of claim 1, further comprising increasing stability of supply platter motion based at least in part on the processed take-up platter control signal information.

10. A method of improving supply platter motion in a no-rewind film transport system, comprising:

determining a time taken for a lead-in film position on a supply platter to transition predefined limits of supply platter acceleration or deceleration based at least in part on supply platter film lead-in position feedback;

determining a speed error between a supply platter reference speed signal and a supply platter speed control signal at the time of the transition;

determining a corrected supply platter speed control signal based at least in part on the speed error signal and the supply platter reference speed signal; and

controlling the supply platter based at least in part on the corrected supply platter speed control signal.

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11. A no-rewind film transport system, comprising:

a take-up platter controlled by a take-up platter motor;

a take-up platter controller capable of controlling the take-up platter motor through take-up platter control signals;

10 a processor capable of receiving and processing the take-up platter control signals;

a supply platter controlled by a supply platter motor;

a supply platter controller capable of receiving the processed take-up platter control signals and controlling the supply platter motor at least in part with the take-up platter control signals.

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12. The system of claim 11, wherein the supply platter controller comprises the processor.

13. The system of claim 11, wherein the processor processes the take-up platter control signals using a transfer function.

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14. The system of claim 13, wherein the transfer function is substantially proportional to the instantaneous ratio between the angular speed of the take-up platter and the required instantaneous angular speed of the supply platter.

15. The system of claim 13, wherein the transfer function comprises a correction factor.

16. The system of claim 11, further comprising:

5 at least one supply platter motor speed or positional sensor producing supply platter motor speed or positional signals; and

at least one take-up platter motor speed or positional sensor producing take-up platter motor speed or positional signal information,

wherein the processor is capable of receiving and processing the supply platter motor speed or positional signal information and the take-up platter motor speed or positional signal information.

17. The system of claim 16, wherein the supply platter motor is controlled by the supply platter controller based at least in part on the processed supply platter motor speed or positional signal information and the processed take-up platter motor speed or positional signal information.

18. The system of claim 17, wherein the processor processes the take-up platter control signal information, the supply platter motor speed or positional signal information and take-up platter motor speed or positional signal information with a transfer function.

19. A system according to claim 12, wherein when a supply film roll on the supply platter has an inner radius approximately equal to an outer radius of a take-up film roll on the take-up platter, the transfer function is substantially constant.

5 20. The system of claim 11, wherein stability of supply platter motion is increased based at least in part of the processed take-up platter control signals.